CITY LIFE AND MALE MORTALITY.

By J. E. Baker.

The complexity of modern life appears in concentrated solution in the city. Here we find the demoralizing luxury of the ultra-rich and the awful squalor of the very poor; here, too, the nervous strain and the alluring temptations of the great industrial class, a class far more numerous and far more important than both the extremes of wealth and poverty taken together. Hence Dr. Ogle characterizes the city as "a mighty vampire, continually sucking the strongest blood of the country to keep up an abnormal supply of energy it has to give out in the excitement of a too fast and unwholesome life."

The breaking point in human vitality is death. How people die indicates in a considerable measure how they have lived and how succeeding generations will live. Says Dr. Farr: "There is a relation between death and national primacy . . . ; there is a relation between the forms of death and moral excellence or infamy." The economic life of the nation depends primarily upon the male sex, and more especially upon it during its years of vigorous maturity. Accordingly, we ought not to be satisfied with the mere knowledge that city death-rates are usually higher than those for the country, but should seek to determine how deadly is city life to men as a class.

The registration area, comprising the states of Rhode Island, Massachusetts, New York, New Jersey, Connecticut, New Hampshire, Michigan, Maine, and Vermont, by the United States census of 1900, had a death-rate in cities of 18.6 and in the rural portion of 15.4 per thousand of population. This higher city death-rate fell more heavily upon men than upon women, for, while the male death-rate in cities was 19.8 per

thousand, the female death-rate was only 17.5 per thousand. In the rural portion of the area, however, the death-rates for the two sexes were fairly equal, the male death-rate being 15.8 and the female 15 per thousand of respective populations. Since the male rate is generally higher than the female rate, it will be convenient to call this *difference against the males* "excess." Thus in the registration area the urban excess is higher than the rural excess by 1.5 per thousand of population. Is this typical of the whole United States?

For territory outside of the registration area the census of 1900 did not compute death-rates for the reason that the prevailing lax regulations permit many deaths to go unrecorded. It may be assumed, however, that the deaths of males are recorded with about the same degree of fidelity as the deaths of females: hence deficiencies in the rates which might be computed would be of amount rather than of proportion. From the laws of probability, then, it may be assumed that the omissions in each sex will be approximately equal, and, therefore, the male and female death-rates may be compared with each other, and that comparison carried from state to state.

Outside the registration area no distinction is made in the census between urban and rural populations or urban and rural deaths, but, if city life is particularly deadly to men, then, other conditions being equal, in those states where a large proportion of the population is found in cities, we shall find a high male excess. The census sets a population of 8,000 as entrance requirement to the rank of city, so the proportion of a state's population found in cities of 8,000 or more is used to determine the rank of that state in urban importance.

So many local influences are at work in every community, subduing or accentuating any general force, that in comparisons between individual states the universal law may be completely hidden. Therefore, it is necessary, after ranking the states according to urban importance, to consider them in groups. Computing the death-rate for each sex in each group (Table I),

TABLE I.

	Total Population found in Cities of 8,000 or over.	Male Death-rate.	Female Death-rate.	Ratio Male to Female Death-rate.	"Excess."
Rhode Island	81.2				
Massachusetts	76.0				
New York	68.5				
New Jersey	61.2				
Connecticut	53.2				
Illinois	47.1				
Maryland	46.9				
Pennsylvania	45.5				
California	43.7				
Delaware	41.4	16.88	14.90	1.133	1.98
New Hampshire	38.6				
Ohio	38.5				
Colorado	38.1				
Washington	31.9				
Michigan	30.9				
Missouri	30.8				
Wisconsin	30.7				
Montana	27.0				
Minnesota	26.8				
Utah	25.2	13.04	11.55	1.129	1.49
Indiana	24.2				
Wyoming	24.1				
Oregon	23.9				
Maine	23.7				
Louisiana	22.8				
Kentucky	16.4				
Iowa	16.8				
Nebraska	15.8				
Florida	15.0				
Virginia	14.7	12.47	11.88	1.049	0.59
Kansas	14.0				
Tennessee	13.4				
Texas	11.3				
Vermont	11.2				
Georgia	11.0				
West Virginia	7.7				
South Carolina	7.5				
Alabama	7.3				
Arkansas	5.4				
North Carolina	5.1	12.87	12.66	1.016	0.21
Oklahoma	5.0				
North Dakota	3.0				
South Dakota	2.6				
Mississippi	2.6				
Nevada	0				
Indian Territory	0				
New Mexico	0				
Idaho	0				
Arizona	0	11.04	11.06	0.998	−0.02

we find that in the first group of states the male excess is 1.98 per thousand of population; in the second group, 1.49; in the third, .59; in the fourth, .21; and, in the fifth, a minus .02, that is, a female excess. The gradation is marked by its regularity.

But perhaps this smaller male excess in the lower groups is due to the insufficiency of data. For instance, if the normal male death-rate is 16 and the female death-rate is 14, the excess is 2; but, if only half the data are gathered, the rates will be 8 and 7, respectively, and the excess will be only one, giving the gradation just noted. To satisfy this sound objection, use the method of ratios, with the female death-rate as the base, or 1. The ratio between 8 and 7 is the same as between 16 and 14. From this method the ratio in the first group is approximately 1.133; in the second group it is 1.129; in the third group, 1.049; in the fourth, 1.016; and, in the fifth, .998, giving the same gradation as before (See Table I, columns 2 and 3). The fact is established, then, that the male excess increases in size as the cities increase in importance.

The excess in the death-rate among males observable in the cities is not due to a peculiar age composition in the urban population. This is made evident by the census statistics for the registration area. Table II shows, in each of the eight age groups considered, an excess in the death-rate among males in cities as compared with the death-rate among males in the rural districts.

TABLE II.

EXCESS IN REGISTRATION STATES.

Ages	Under 1	Under 5	5–14	15–24	25–34	35–44	45–64	65–
Cities	31.6	10.6	0.1	0.7	1.3	2.1	4.0	7.6
Rural	27.4	6.4	.0	—0.1	—1.0	—0.4	0.7	6.3
Difference against city	4.2	4.2	0.1	0.8	2.3	2.5	3.3	1.3

Compiled from United States Census, *Vital Statistics*, Vol. I, p. lxxx.

To continue the investigation, each state may be studied with four age groups; viz., 0 to 14, 15 to 24, 25 to 54, and 55 upwards, corresponding to the periods of childhood, youth, maturity, decline. By using the same methods of computing rates and the same groups of ten states in each age group, as described in the preceding paragraphs, fairly similar results are obtained. In both the early periods, childhood and youth, the ratio of male to female death-rate shows a sudden drop between the first and second groups of states, while the third, fourth, and fifth groups show a fairly downward tendency in childhood and an indifferent tendency in youth (See Table III*a*). In the period corresponding to decline the movement is so irregular that any interpretation would be too involved and lengthy for present purposes, if at all plausible when done. It does not directly upset the thesis of this study, but it certainly does not support it, except in a far-fetched fashion, when the first two groups are compared with the last three (See Table III*b*).

But the age period 25 to 54, maturity, the age of greatest productivity, of greatest commercial stress, the age of home making and family rearing, the age of greatest vital interest and of greatest industrial importance,—this age, if any, should afford the crucial test as to whether or not the city is a ruthless destroyer of men. With a ratio falling by remarkably regular steps from 1.172 in the first group of states to 1.047 in the second group, then to .914 in the third, and .879 and .815 in the fourth and fifth, respectively, the hustle and dash, the nervous strain, the luxury and allurements of city life, are proved to be positive promoters of male mortality.

TABLE III*a*.

ANALYSIS BY AGE GROUPS AND GROUPS OF TEN STATES.

	Ages 0–14.			Ages 15–24.		
	Male Death-rate.	Female Death-rate.	Ratio Male to Female Death-rate.	Male Death-rate.	Female Death-rate.	Ratio Male to Female Death-rate.
Rhode Island .						
Massachusetts .						
New York . . .						
New Jersey . .						
Connecticut . .						
Illinois						
Maryland . . .						
Pennsylvania .						
California . . .						
Delaware . . .	20.1	16.7	1.204	5.77	5.31	1.087
New Hampshire,						
Ohio						
Colorado . . .						
Washington . .						
Michigan . . .						
Missouri						
Wisconsin . . .						
Montana . . .						
Minnesota . . .						
Utah	13.03	11.6	1.123	5.2	5.37	0.968
Indiana						
Wyoming . . .						
Oregon						
Maine						
Louisiana . . .						
Kentucky . . .						
Iowa						
Nebraska . . .						
Florida						
Virginia	12.6	11.2	1.125	5.65	6.19	0.913
Kansas						
Tennessee . . .						
Texas						
Vermont . . .						
Georgia						
West Virginia .						
South Carolina .						
Alabama . . .						
Arkansas . . .						
North Carolina .	16.9	15.7	1.076	6.62	7.08	0.935
Oklahoma . . .						
North Dakota .						
South Dakota .						
Mississippi . . .						
Nevada						
Indian Territory,						
New Mexico . .						
Idaho						
Arizona	16.4	15.6	1.051	8.47	9.02	0.939

TABLE III*b*.

ANALYSIS BY AGE GROUPS AND GROUPS OF TEN STATES.

	Ages 25–54.			Ages 55 and over.		
	Male Death-rate.	Female Death-rate.	Ratio Male to Female Death-rate.	Male Death-rate.	Female Death-rate.	Ratio Male to Female Death-rate.
Rhode Island .						
Massachusetts .						
New York . . .						
New Jersey . .						
Connecticut . .						
Illinois						
Maryland . . .						
Pennsylvania .						
California . . .						
Delaware . . .	11.0	9.47	1.172	51.7	46.8	1.105
New Hampshire,						
Colorado . . .						
Washington . .						
Michigan . . .						
Missouri						
Wisconsin . . .						
Montana . . .						
Minnesota . . .						
Utah	8.54	8.16	1.047	45.6	35.2	1.295
Indiana						
Wyoming . . .						
Oregon						
Maine						
Louisiana . . .						
Kentucky . . .						
Iowa						
Nebraska . . .						
Florida						
Virginia	8.3	9.08	0.914	40.9	37.0	1.105
Kansas						
Tennessee . . .						
Texas						
Vermont . . .						
Georgia						
West Virginia .						
South Carolina .						
Alabama . . .						
Arkansas . . .						
North Carolina .	9.28	10.55	0.879	37.7	34.2	1.102
Oklahoma . . .						
North Dakota .						
South Dakota .						
Mississippi . . .						
Nevada						
Indian Territory,						
New Mexico . .						
Idaho						
Arizona	10.04	12.32	0.815	41.8	38.0	1.100

Tables compiled by Westergaarde suggest that probably the city, with its physicians and hospital service and its freedom from severe muscular work, saves female life during this the child-bearing period rather than destroys male life at such a wholesale rate. The succeeding table, however, which shows that from these very causes connected with child-bearing the American city is more fatal to women than is the country, refute the suggestion squarely, so far as the United States is concerned.

It is plainly set forth now that, with the increase of cities in number and size, the death-rate of men grows higher and higher in comparison with the death-rate of women. In some groups of states during certain age periods this general statement does not hold good, but in the main it seems to be true. The natural inquiry is, What is the reason? To answer, in general terms, that city life is nerve-racking, artificial, and unsanitary, is to answer nothing that will point out any remedy. We must know at what *points* we are attacked before we can concentrate our forces to repel the assault. So an inquiry was made into the *causes* of death, to ascertain, if possible, what diseases are particularly fatal to men in cities.

The high excess of male mortality in cities in the registration area has been found to be typical of the whole United States hence the registration data for causes of death may be considered fairly indicative of conditions throughout the country.

On page 566, Vol. I, *Vital Statistics,* Census of 1900, a list of classified causes of death is given for the registration area, with the death-rates per 100,000 of population for each sex, from each cause, for both the urban and the rural districts (See Table IV). It will be noted that the city gives an excess from all causes of 234 (*Ibid.*, col. 5), while the country gives an excess of 85.2 (col. 6). Thus the city excess is 148.8 higher than the country excess (col. 7). We shall call this difference between the *excesses* of the respective districts "*preponderance.*" By looking at the causes, it will be seen that only one class, Diseases of the Circulatory System, gives a large rural preponderance (in other words, a city *female* preponderance) of 24.3;

TABLE IV.

CAUSES OF DEATH.

Rates per 100,000 *of Population.* (*Registration Area.*)

(Vol. I, *Vital Statistics*, Census 1900, p. 566.)

	Cities.		Rural.		City Excess.	Rural Excess.	City Preponderance.
	Male.	Female.	Male.	Female.			
I. General Diseases . .	878.7	794.1	621.8	677.0	84.6	—55.2	139.8
Venereal Diseases .	3.8	3.0	1.1	0.8	0.8	0.3	0.5
Alcoholism	14.1	3.7	5.7	1.1	10.4	4.6	5.8
Old Age	30.5	45.9	69.2	79.8	—15.4	—10.6	—4.8
Consumption . . .	234.3	176.4	124.9	143.8	57.9	—18.9	76.8
Cancer and Tumor	46.4	83.1	51.8	91.8	—36.7	—40.0	3.3
II. Nervous System . .	221.3	195.7	232.0	212.2	25.6	19.8	5.8
III. Of the Circulatory System	150.0	146.6	177.2	149.5	3.4	27.7	—24.3
Heart Disease . .	130.6	132.1	156.8	134.3	—1.5	22.5	—24.0
IV. Respiratory System .	356.6	314.4	200.0	198.0	42.2	2.0	40.2
Pneumonia . . .	252.4	214.6	136.9	134.8	47.8	2.1	45.7
V. Digestive System . .	96.0	93.2	89.9	91.3	2.8	—1.4	4.2
VI. Urinary and Sexual Organs	131.4	114.3	106.5	75.3	17.1	31.2	—14.1
VII. Connected with Pregnancy	—	27.6	—	24.5	—27.6	—24.5	—3.1
VIII. Bones and Joints . .	5.1	3.2	4.1	3.4	1.9	0.7	1.2
IX. Skin	3.5	2.8	3.2	2.5	0.7	0.7	.0
X. Absorbent System .	1.3	1.3	1.6	1.7	0	—0.1	—0.1
XI. Accidents and Injuries,	127.2	42.8	122.9	41.4	84.4	81.5	2.9
Suicides	9.7	3.3	5.3	2.4	6.4	2.9	3.5
Unknown	9.4	7.5	21.7	18.9	1.9	2.8	—0.9
All Causes	1,980.5	1,746.5	1,580.9	1,495.7	234.0	85.2	148.8
	(1)	(2)	(3)	(4)	(5)	(6)	(7)

and two classes, General Diseases and Diseases of the Respiratory System, give a city preponderance of 139.8 and 40.2, respectively; while the other classes about balance up each other.

In the difference, therefore, between the city preponderance of 180 from General Diseases and those of the Respiratory System, and the rural preponderance of 24.3 from Diseases of the Circulatory System, we have somewhat more than accounted for the general city preponderance of 148.8, having 155.7.

General Diseases include ordinary fevers, contagions, bodily disorders, alcoholism, old age, venereal troubles, cancers, tumors, consumption, etc. It is the most numerous class of diseases, being divided by the census into four sub-classes, containing in all 41 specific diseases, and being responsible for nearly a half of all deaths. No one of these specific diseases has a very large city preponderance except consumption. Consumption gives the alarming city preponderance of 76.8, nearly a half of the *total* city preponderance.

Diseases of the Respiratory System are seven in number, and the preponderances balance one another in such a manner as to leave a total *rural* preponderance, if it were not for pneumonia, which with a city preponderance of 45.7 brings the city preponderance for this class up to 40.2. From this table (Table IV), then, it would seem that two specific diseases, pneumonia and consumption, are responsible for nearly six-sevenths of the city preponderance, the exact figures being 122.5 to 148.8. All of the other 108 specifically mentioned diseases so balance each other as to yield a city preponderance of only 26.3,—barely one-third as large as consumption alone.

The "hustle and dash" and "nervous strain" of city life do not seem to be so fatal to men as might have been expected, for Diseases of the Nervous System give a city preponderance of only 5.8, and suicides one of only 3.5. Manufacturing and congested traffic is hazardous to men, but the country has dangers as well, so the city preponderance in Accidents and Injuries rises no further than 2.9. The immoral allurements of city life do not assume high importance, as far as *death-rates* or preponderances are concerned, due largely, no doubt, to the fact that dissipation in most cases first weakens the vitality, after which other complications set in, to which the death is

ascribed.* In proportion to the size of the death-rates, however, the city preponderances of 0.5 in Venereal Disease and of 5.8 in Alcoholism are very large. Westergaarde's theory, that cities save female life during the child-bearing age, is apparently disproven, for the city shows a higher female death-rate than the country in diseases connected with pregnancy and in diseases of the urinary and sexual organs, the city rate being 3.1 higher in the former case and 39.0 higher in the latter. In fact, the *country* seems to be such a saver of female life from diseases of the urinary and sexual organs that, while the city death-rate for this class is 24.9 higher than the country rate among *males*, it is 39.0 higher among females. Of course, the registration area takes in practically none of the newer agricultural regions, so that as between these and city life Westergaarde's position may be correct.

Willcox, in his Census Bulletin on Mortality, suggests that the male sex may be endowed with less vitality than the generally supposed "weaker sex."† If this be true, the weakness manifests itself most evidently through the medium of pneumonia and consumption especially. Whether the fatality of these diseases is a sign of inherent weakness or of increased exposure is worthy of closer inspection.

Table V presents the classified occupations of males in the United States as given in the Census of 1900.‡ Opposite each class and occupation is the death-rate per 100,000 male population from consumption and from Diseases of the Respiratory System. Where females are engaged in the same or similar occupations, the female death-rate from these causes is likewise put down.

* Families of the deceased influence the physician to conceal shameful causes of death.

† "For the differences in the death-rates of the sexes in infancy, when such social causes as greater exposure of males to dangers of all sorts are absent, other than social forces must be appealed to for explanation." Willcox, p. 725.

‡ Part I, *Vital Statistics*, p. cclxii.

TABLE V.

OCCUPATIONS IN RELATION TO CONSUMPTION AND DISEASES OF THE RESPIRATORY SYSTEM.

Rates per 100,000 *Respective Population.* (*Registration Area.*)

(Vol. I, *Vital Statistics*, Census 1900, p. cclxii.)

OCCUPATION.	Consumption.		Respiratory Diseases.	
	Male.	Female.	Male.	Female.
Professional Class	182.2	—	187.1	
1. Architects, Artists, etc.	188.9	—	102.1	
2. Clergymen	123.5	—	340.7	
3. Journalists	188.4	—		
4. Lawyers	139.9	—	178.4	
5. Musicians	349.8			
6. Physicians	168.8	100.2*	243.0	121.7*
7. Teachers	144.0	126.1	144.0	61.9
8. Clerical and Official	304.2	—	167.7	
9. Book-keepers and Clerks	398.0	198.0	173.3	64.7
10. Bankers, Brokers, etc.	92.1	—	142.7	
11. Collectors and Agents	131.2	—	144.7	
Mercantile	165.8	—	167.0	
12. Pharmacists	305.5	—	230.9	
13. Merchants	163.8	—	216.7	
14. Pedlers, etc.	250.9	—	143.3	
15. Public Entertainers	268.5	—	194.5	
16. Hotel and Boarding-house Keepers	210.3	—	255.4	
17. Saloon and Restaurant	285.6	—	176.7	
18. Police and Military	254.8	—	179.7	
19. Barbers, etc.	334.9	—	107.5	
20. Janitors	251.4	—	359.1	
21. Police, Watchmen, and Detectives	136.7	—	213.2	
Laboring	376.0	—	313.2	
22. Laborers	370.7	—	323.5	
23. Servants	430.3	319.7	222.5	222.6
Industrial	262.1	—	181.2	
24. Bakers and Confectioners	250.1	—	155.7	
25. Blacksmiths	212.9	—	227.0	
26. Boot and Shoe	135.5	—	120.0	
27. Brewers, etc.	256.8	—		
28. Butchers	287.7	—	201.8	
29. Cab. and Upholsterers	359.1	—	181.6	
30. Carpenters	231.0	—	191.5	
31. Cigar and Tobacco Workers	476.9	—	312.7	
32. Printers, etc.	435.9	—	154.5	
33. Coopers	399.5	—		
34. Engineers (Stationary)	229.7	—	212.9	
35. Iron and Steel Workers	236.2	—	224.7	
36. Leather Workers	227.3	—	97.4	
37. Machinists	195.9	—	141.9	
38. Marble and Stone Cutters	540.5	—	201.7	

* Includes female nurses and midwives.

TABLE V.—*Continued.*

OCCUPATIONS IN RELATION TO CONSUMPTION AND DISEASES OF THE RESPIRATORY SYSTEM.

Rates per 100,000 *Respective Population.* (*Registration Area.*)

(Vol. I, *Vital Statistics*, Census 1900, p. cclxii.)

OCCUPATION.	Consumption.		Respiratory Diseases.	
	Male.	Female.	Male.	Female.
Industrial (continued):				
39. Masons	293.9	—	311.1	
40. Textile Factory Hands	207.6	144.1	107.4	46.8
41. Millers (Flour, etc.)	198.5	—	297.8	
42. Painters and Glaziers	319.3	—	190.9	
43. Plumbers	294.0	—	123.0	
44. Tailors	218.0	130.1	159.8	66.1
45. Tinners	365.3			
Agricultural, Transportation, and Outdoor	147.2	—	181.5	
46. Boatmen	256.8			
47. Draymen, Hackmen, and Teamsters	261.4	—	170.3	
48. Farmers and Farm Labor	111.7	—	198.0	
49. Gardeners, Nurserymen	186.6	—	230.3	
50. Liverymen	267.5	—	141.4	
51. Lumbermen	107.1	—	122.3*	
52. Miners	120.9	—	102.8	
53. Sailors	333.0	—	310.0	
54. Railroad Men	129.8	—	79.5	

It will be noticed that the death-rate for the Professional class from consumption is 182.2; for the Mercantile class, 165.8; for the Laboring and Servant class, 376.0; and for the Manufacturing and Industrial class, 262.1; for Agriculture, Transportation, and the general Outdoor class, only 147.2. For the strictly rural classes, farmers and lumbermen, the rate is still lower,—only 111.7 and 107.1, respectively. Only one of all the fifty-four mentioned occupations has a lower death-rate from this cause than farmers. Bankers and brokers who can afford the most sanitary homes, frequent vacations and travel for recuperation, and the very best medical care that the times offer, have a death-rate from consumption of 92.1. Their clerks and book-keepers, at the same time, have a death-rate from this cause of 304.2 and 398.0, respectively. Thus it would seem that indoor life is particularly favorable

* Pneumonia alone.

to a high death-rate from consumption. The fact that women in the country have a higher death-rate from consumption than men, though lower than the city female death-rate from this cause, bears out the conclusion (See Table IV). To be sure, sailors have the high rate of 333, but their case is obviously exceptional. Boatmen are in a similar class. Gardeners and nurserymen seem to be somewhat of an exception, but their rate of 186.6 pales into insignificance when compared with 540.5, the death-rate from consumption for stone-cutters, the 435.9 for printers, the 430.3 for servants, and the 476.9 for tobacco workers.

But, if indoor life is conducive to consumption, should not the women be as subject to consumption as men? which is not the case. Women are not, however, subject to the *same* indoor conditions as men. If we compare men and women in the same occupations, we find that in each instance the female death-rate is much lower (of physicians, teachers, book-keepers, servants, and textile workers,—numbers 6, 7, 9, 23, 40,—Table V). This may indicate that women are more able to withstand disease than men, but more likely these figures result from the different age composition of the sexes in these occupations. It is well known that most of the females in these occupations are young. They marry out of the occupation into homes before disease gets hold of them or before the disease is manifest, so the occupation is not charged up with the death. Of the reported deaths in the registration area, 75.6 per cent. of the male decedents had gainful occupations against 13.5 per cent. of the female decedents.* Consequently, a comparison between men and women under similar conditions must be a comparison between men in the office, shop, and factory, and women in the home. The city home may not be of the best, but it is not open to as much contagion as the factory; it has no such dusty air as the factory; it remains the same from year to year, so that the wife becomes physically adjusted to it. Neither is she subject to the exposure to change which results from going from a hot, stuffy factory into a cold, windy

* Census 1900, *Vital Statistics*, Part I, p. cclix.

street. So the conclusion is that indoor occupations account in a large part for the high excess of male mortality in the city resulting from consumption.

The case for Diseases of the Respiratory System is not so clear. It will be remembered that from this cause there is a city preponderance of 40.2,—something over half as large as consumption. In the rural districts the male and female death-rates are nearly equal, being 136.9 and 134.8 respectively (See Table V). While in the city there is a wide discrepancy, the rates being 252.4 and 214.6 respectively. The city preponderance is due, then, to one of two things, either that the country is extra severe to women or that the city is extra severe to men. The latter seems to be the case, for the city is more severe on women as well as on men, having a female pneumonia death-rate 79.8 higher than the country (See Table IV, cf. cols. 2 and 4). This situation is only accentuated in the case of men, the city rate being 115.5 higher than the country rate (*Ibid.*, cf. cols. 1 and 3). We must look within the city, then, for the conditions that bring about the male excess.

If we compare the male death-rate from this cause with the female death-rate in the same occupations, as was done before (See Table V), we find that in each case, except servants, the male rate is much the larger. These comparisons are rather more fair than in the case of consumption, for pneumonia, not being a slow disease, like consumption, is nearly as fatal to the young as to the middle-aged, and is more the result of immediate conditions than of long-continued conditions. Therefore, the age composition of the occupations would not have so much effect. Why women-servants should have such a high rate from Diseases of the Respiratory System is not apparent. It may be that, because they are in the homes of others, they do not receive sufficient care; while men-servants, on the other hand, in many cases have homes, and, in case they do not, the masculine propensity to give up work and to demand attention when an ailment is felt procures them help.

The greater indoor life of the city, while it seems to account for the high city death-rate from consumption, does not seem to

do so satisfactorily in the case of pneumonia. For, while the outdoor class of occupations has a rate of 181.5, the Industrial class is no higher (181.2), the Professional class is but little higher (187.1), and the Mercantile class is much lower (167.0). The Laboring and Servant class, however, has an enormously higher rate, 313.2. Table VI will indicate that this class is numerous enough to counterbalance with their high rate the somewhat low rate of the Mercantile class and to give the city the preponderance noted before. Farmers have a higher death-rate from respiratory diseases than the average of the outdoor class, their rate being 198. Indeed, of the fifty occupations with rates given, only eighteen had higher rates, while thirty-one had lower rates. These eighteen that are higher, however, are enough higher to not only counterbalance these thirty-one, but to make the city death-rate to males from respiratory diseases 156.6 higher than the country rate and 137.8 higher for pneumonia alone (See Table IV, cols. 1 and 3).*

TABLE VI.

NUMBERS OF MALES IN CLASSES OF OCCUPATIONS.
(*Registration States.*)

Agricultural	955,000
Labor and Servant	860,000
Professional	215,000
Mercantile	1,305,000
Industrial	1,899,000

Compiled from Census 1900, Occupations, Table 33.

In view of the fact that women have a much lower death-rate from respiratory diseases than men in most of the occupations where they share the same conditions, and considering that the age composition of the sexes in these occupations has but comparatively little effect, it must be concluded that men are more prone than women to these diseases from lack of constitutional vigor. Whether this lack of vigor results from an

* This is not *wholly* true. The deaths from pneumonia, etc., among males not in occupations probably has some effect.

inborn tendency or from the greater stress of masculine activity in both a business and a social sense cannot be answered here. The fact that women have a higher death-rate from these diseases in the city than they have in the country leads to an inference that the oft-mentioned artificiality, hustle and dash, and nervous strain of city life do have their weakening effect. And it may be that the greater strain, the more general exposure, and the more frequent dissipation of men in cities turn down ever so slightly the flame of their bodily vigor, a conjecture strengthened by the city preponderances, small though they be, in nervous diseases, suicide, venereal disorders, and alcoholism, so that the small degree of vitality which so often means the difference between life and death is wanting when a virulent malady like pneumonia assails. Again, it may be that Willcox is correct in his inference, previously mentioned, that women have greater constitutional resistance to disease. By some it is urged that the larger head of the male child weakens him at birth, and, though his rougher life in youth may bring him greater physical strength, it never restores the lost constitutional strength. The greater death-rate among male infants who share precisely the same conditions with female infants seems almost conclusive evidence that men begin life with a far greater susceptibility to bodily ailment than women.

To recapitulate the conclusions which have been suggested, it seems that a general deficiency of organic vigor in males (from whatever causes) results in a high male excess of mortality from pneumonia in cities; that, whether or not this deficiency in organic vigor lies at the basis of the much greater excess from consumption, city conditions attending indoor labor have a profound effect. These two diseases are of such prevalence as to bring about an excess of male over female mortality, generally higher in cities than in rural sections. This excess is roughly in proportion to the amount of city life, though it is affected by geographical environment.